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15 July 1965

[redacted]

Your "medicine" example is a strikingly useful analogy. Two additional points which impress me as applicable to the world of intelligence functions are as follows:

I. The Acute Emergency

A. Medicine
(1) The acute diagnostic problem (acute belly or coma). Good medicine requires complete re-evaluation at frequent intervals (q 6-12 hours) of the entire case with repeat of all significant diagnostic tests (x-ray, lab, physical exam, etc.) to detect any changes in previously negative studies.

B. Intelligence
(1) The acute emergency. Good intelligence requires a complete re-evaluation at frequent intervals and not just an exercise of "following developments as we now do." Previousl negative reports of significance need to be rechecked (as we did in Cuba) to detect significant events or information previously hidden.

II. The Syndrome Syndrome

A. Medicine
(1) Bad medicine accepts the syndrome name as a "diagnosis."
(2) Good medicine does research on the syndrome problem and discovers the

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true etiology (s).

B. Intelligence

(1) Bad intelligence accepts a "named" problem (deGaulle or Sukarno) as the real diagnosis or problem.

(2) Good intelligence investigates and discovers the true reason (s) for the problem (which actually in some cases may be unknown to the problem source)(patient).

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RESEARCH ON THE INTELLIGENCE PROCESS

The purpose of this paper is to present a concept of Intelligence and draw certain analogies and implications from this concept. Whether this concept is accurate or complete is irrelevant at the moment. For the record, it has validity to me based primarily on my past experience in the four directorates of the Agency where I was struck by the similarity rather than the dissimilarity of the problems which the Agency faces. I hope that other members of the planning group express their concept of Intelligence and that we can examine this process together in order to have a common framework for action before the moment of truth arrives on 1 September.

Concept. Intelligence is frequently referred to as the second oldest profession. I believe that a) Intelligence is a profession; b) it can be described functionally as a large information processing system which behaves operationally like the human information processing system; and c) this has implications for the future of great importance. I would like to examine these hypotheses in more detail with specific reference to the profession of medicine. I suspect that the analogy would hold up in other professions as well. The Intelligence process, like medicine, begins with the accumulation of information. Some of this information such as the written word and verbal communication is subjective in nature and difficult to verify. Examples include written and verbal statements made by political leaders, agents, etc. (medicine - symptoms). Other information is more objective and tangible and can be verified by our senses or extensions thereof. Examples include missile sites, Elint signals, etc. (medicine - signs). Raw information used in intelligence has two other features which are common to medicine. Information may be either overt or covert in nature. The other common feature is that the information itself is highly time dependent; that is, it may be very perishable, and the sequence in which the information is reported may be as important as the information content itself.

The second stage in the Intelligence process is concerned with the analysis of the information which permits the intelligence analyst to integrate his "data base" into

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a picture which he believes accurately reflects some facet of the environment (medicine - diagnosis). Examples include basic and current intelligence. The most important function of Intelligence involves the prediction of future events (medicine - prognosis). Examples include estimates of various types.

The validity and reliability of Intelligence estimates will almost surely depend upon the accuracy of basic Intelligence (diagnosis) which in turn depends on the quality of the information available and its appropriate synthesis. At this point, I would like to make the assumption that the purpose of Intelligence is to portray potentially hostile elements in our environment and to predict the dynamic changes which will impinge on our own society (prescience). It is implicit in the act which established the Agency that Intelligence will provide the President and other policy makers with information which will permit them to select that course of action which will lead to the optimal adaptation of our society to the external forces which impinge upon us (medicine - therapy). In some instances, the Intelligence community itself is asked to undertake covert action (interdiction). In most cases action, when required, is delegated to "specialists" such as DOD and the State Department.

Implications. Further development of this analogy would become a futile exercise unless we examine the implications of the hypotheses stated above. If Intelligence is indeed a profession, it is mandatory that it examine its own processes in far greater detail than it has in the past. I suspect that the anecdotal folklore on Intelligence contains within it some very significant information which is overlayed with a larger portion of irrelevant if not misleading dogma. Medicine has its counterpart in the kindly old physician who out of laziness or ignorance gave sympathy rather than therapy. Good Intelligence, like good medicine, would be served better by frequent post mortem examinations of its failures as well as careful documentation and continuing analysis of its successes. More specifically, I believe that the Agency if not the community should undertake a continuing program in depth to include operations research, systems analysis, conflict gaming, predictive modeling, and other forms of "artificial intelligence" as they become more refined. This activity is important to every directorate

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if we are to refine our requirements, improve our predictive capability, use our collection assets more economically, avoid information overload, and use our covert action assets wisely.

Special Implications for the Planning Group. If we are to research the Intelligence process, we must at first identify common problems (pathology) within the Agency and not be misled by the symptoms which mask the pathology. It seems to me that the planning group should not concern itself with the specific features of the plans and programs developed by the directorates but should attempt to identify major common problems and to indicate their long range implications and the priority and level of effort which will be required for their solution. The growing requirements and responsibilities of Intelligence, coupled with the broader range of conflict of strategic significance, no longer permit the ad hoc stimulus-response activity which has characterized Intelligence in the past. A decision not to undertake research on the Intelligence process will inevitably lead to partial if not total inability to adapt to the environment in which we exist much less predict changes in that environment.

Man-Machine Interface. As a practical example, I would like to look more carefully at one common problem area which has been identified although in different terms by the planning group. Mr. Becker presented a lucid and balanced picture of computer capabilities now and in the future with particular emphasis on the hardware technology. Following his briefing and at earlier meetings, there has been an undercurrent of anxiety over the relationship which the human has with these devices. Mr. Becker emphasized that these machines can handle information rapidly and in large quantities. The machines can present this data in a variety of ways, but they cannot create a reliable display of information if the basic input is faulty (garbage in, garbage out). The extent to which computers will be a useful tool to Intelligence will depend largely on how well the human identifies the problem and refines the input to the machine (software). This will inevitably mean experimentation with our own data and direct communication with the machines. I cannot accept the concern which some people have that Intelligence will be automated and that man will be left out of the link. On the contrary, it is likely that man will play an even more significant role because he is freed from certain mechanical activities which

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are required at this time. Indeed it is a biological fact that survival of any living organism is directly related to its adaptability to changes in its environment. Man and other "higher" forms of life have relinquished certain lower order capabilities (sensory and motor) but have developed a higher adaptive, cognitive (thinking) capability. The name of the game, then, would be to optimize that which man does best and mechanize those lower order functions which man does less well.

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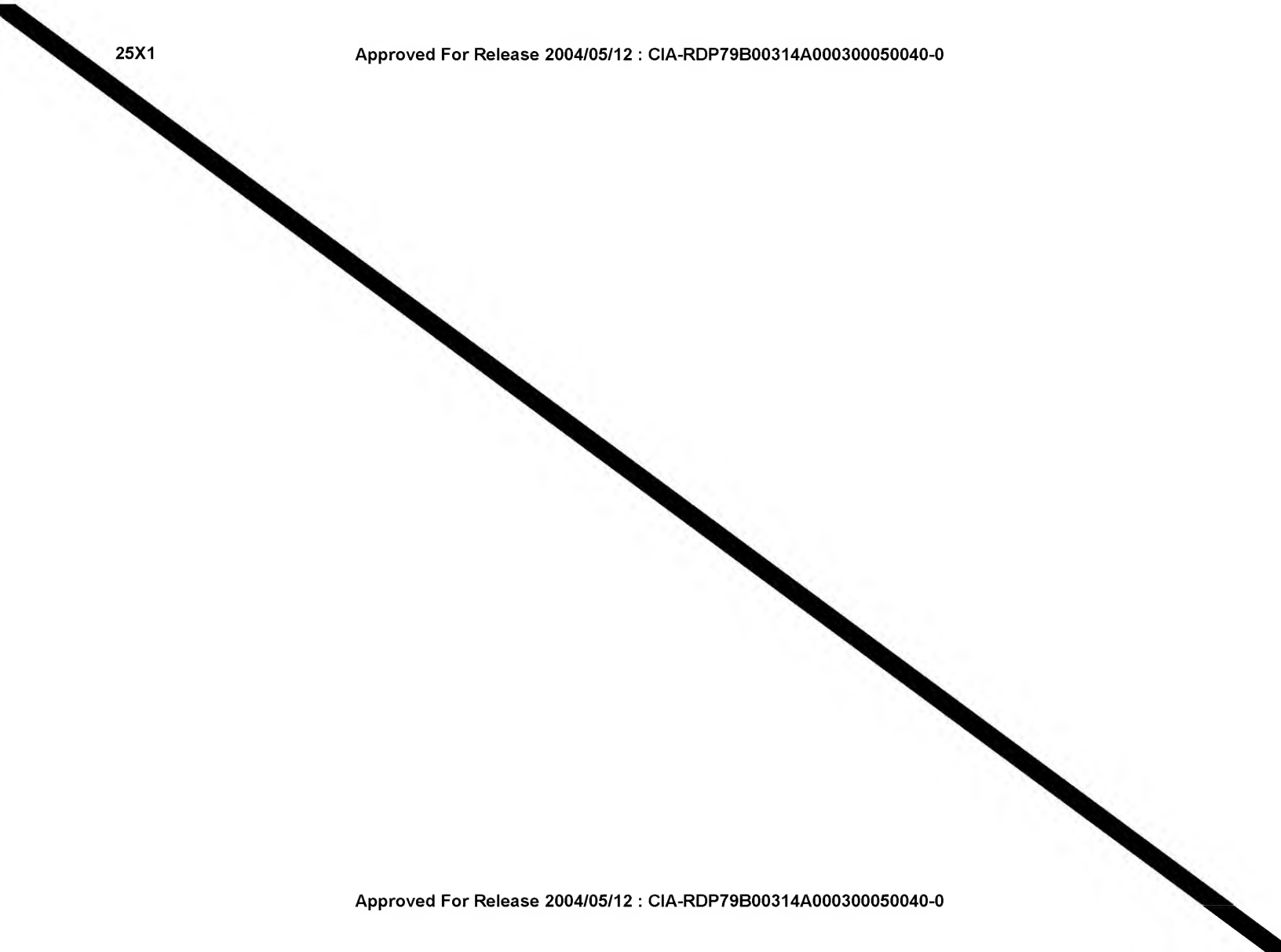

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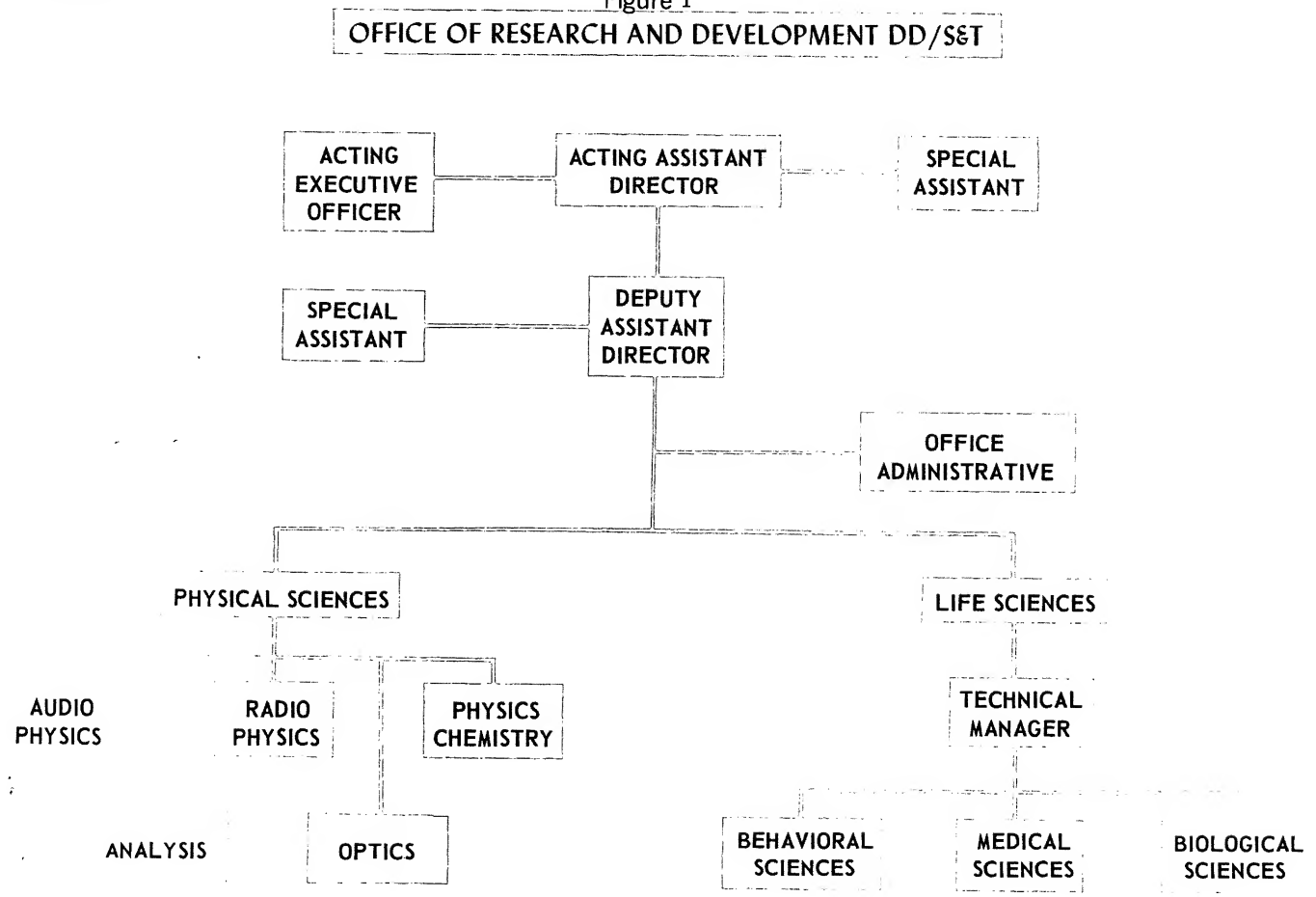

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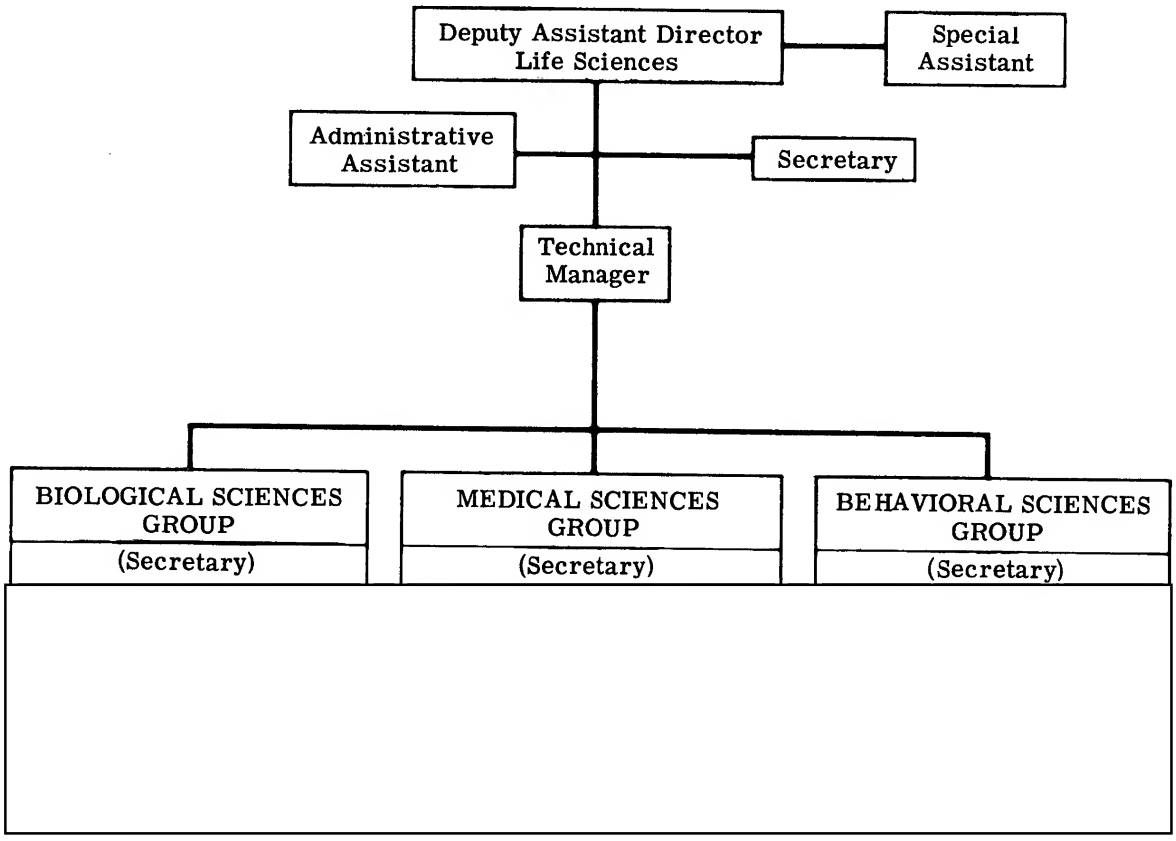

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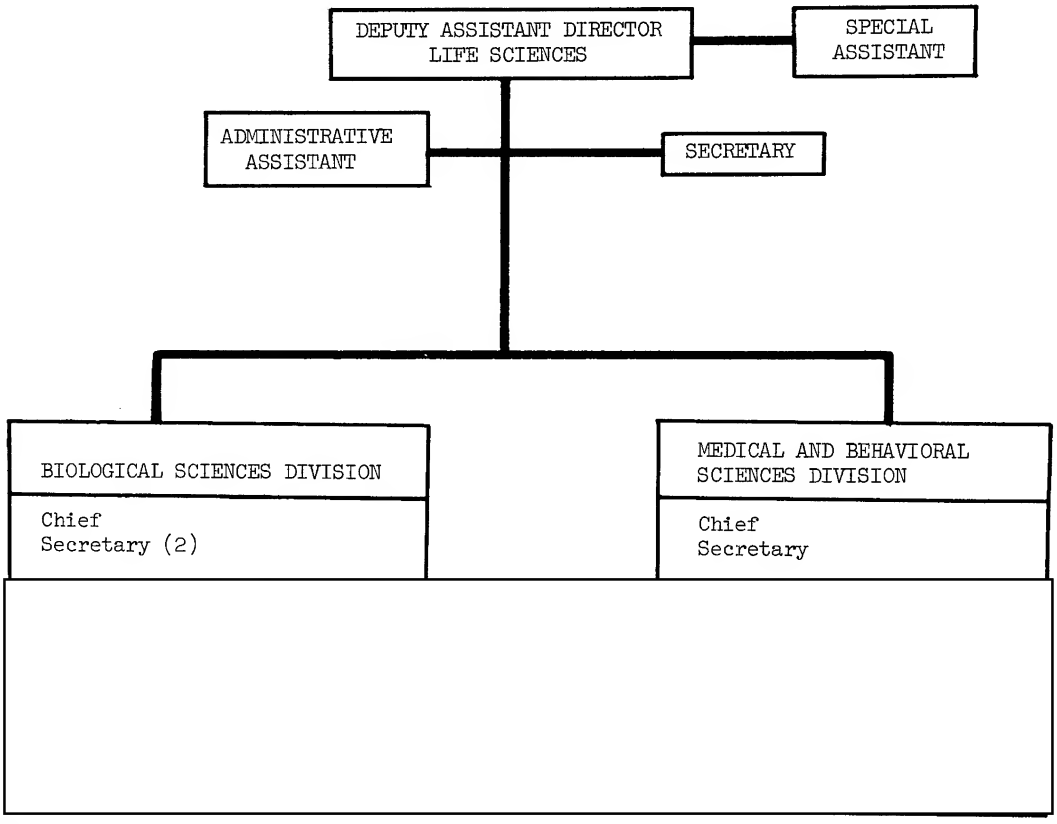

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Figure 1

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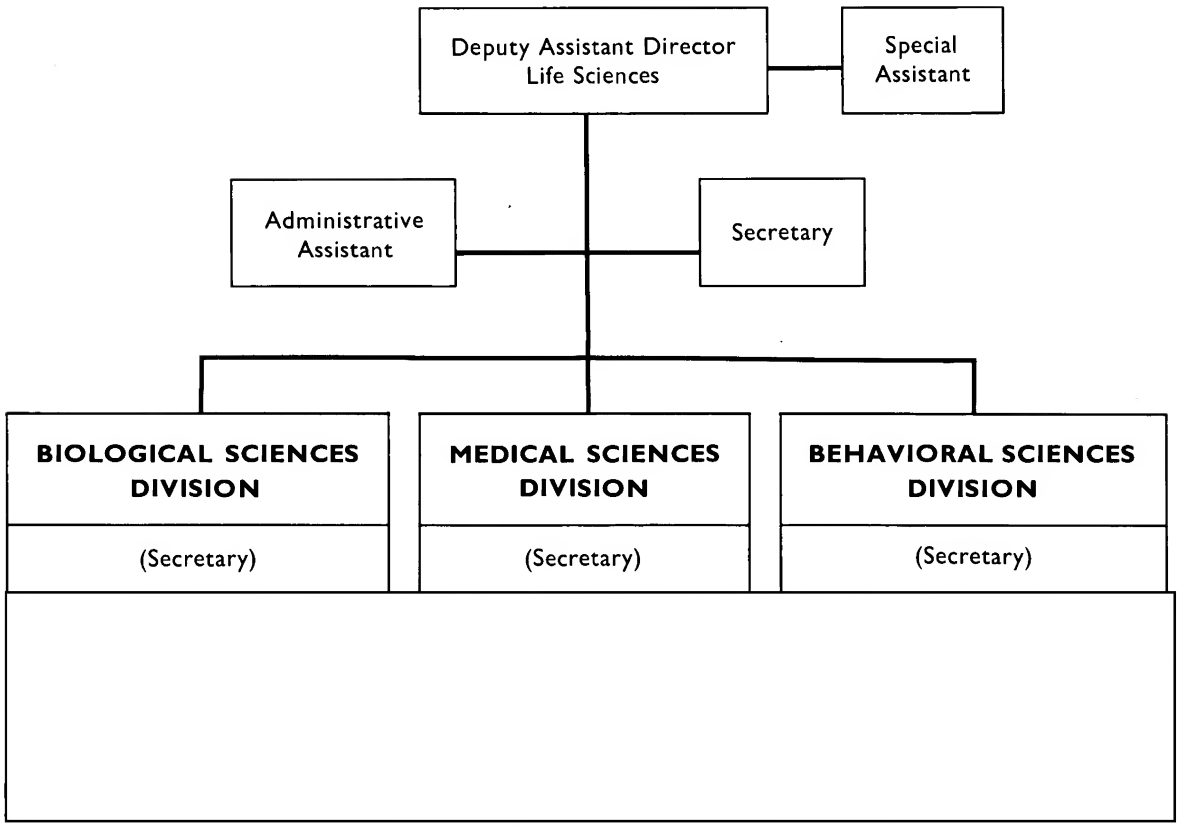

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